

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listing, of claims in the application:

**Listing of Claims:**

1-20. (Cancelled).

21. (Previously presented) A method for controlling metamerism by providing a plurality of formulas that are suitable for producing a color for at least two different types of colored materials, the method comprising:

electronically providing color choices, the color choices selectable to represent the color;

electronically providing criteria choices, the criteria choices selectable to represent at least a characteristic of the at least two different types of colored materials;

electronically receiving a color selection from the color choices;

electronically receiving a first criteria selection from the criteria choices;

electronically receiving a second criteria selection from the criteria choices;

electronically matching the color selection and the first criteria selection and providing a first formula suitable to produce the color represented by the color selection for a first of the at least two different types of colored materials;

electronically matching the color selection and the second criteria selection and providing a second formula suitable to produce the color for a second of the at least two different types of colored materials; and

electronically optimizing the first formula and the second formula to control metamerism between the first colored material and the second colored material.

22. (Currently amended) The method of claim + 21, further comprising electronically receiving a third criteria selection from the criteria choices and combining at least one of the first criteria selection and the second criteria selection with the third criteria selection.

23. (Currently amended) The method of claim + 21, wherein the color choices and the criteria choices are presented in a display.

24. (Currently amended) The method of claim + 21, wherein the criteria includes at least one of a substrate, financial cost, availability, resin, polymer, varnish, printing method, fabrication method and pigment selection.

25. (Currently amended) The method of claim + 21, wherein the criteria includes the ability for a color to resist at least one of sunlight, water, solvent, acid, alkali, temperature, humidity, abrasion, cracking, bending, light and ultraviolet radiation.

26. (Currently amended) The method of claim + 21, wherein the steps of providing, receiving, matching and optimizing occur over a communication network.

27. (Currently amended) The method of claim + 26, wherein the communication network is the Internet.

28. (Currently amended) The method of claim + 21, wherein the step of optimizing includes modifying the color represented by the color choices.

29. (Currently amended) The method of claim + 21, further comprising storing the color choices and the criteria choices in an electronic library.

30. (Previously presented) A system for controlling metamerism by electronically providing a plurality of formulas that are suitable to produce a color for at least two different types of colored materials, the system comprising:

- a memory that electronically stores a color choice, the color choice is selectable to represent the color;
- a color selection module that includes a color selection interface to enable an electronic color selection from a plurality of color choices, wherein the color choices and color selection are stored in the memory;
- a criteria selection module that includes a criteria selection interface to enable an electronic selection of a first criteria selection and a second criteria selection from a plurality of criteria choices, the first and second criteria selections and criteria choices stored in memory;
- a matching module that electronically matches the color selection and the first criteria selection, and electronically matches the color selection and the second criteria selection;
- a formula module that provides a first formula suitable to produce the color for a first of the at least two different types of colored materials, and provides a second formula suitable to produce the color for a second of the at least two different types of colored materials; and
- an optimization module, the optimization module electronically optimizes the first formula and the second formula to control metamerism between the first colored material and the second colored material.

31. (Currently amended) The method of claim ~~40~~ 30, wherein the criteria selection interface enables at least a third electronic criteria selection.

32. (Currently amended) The method of claim ~~44~~ 31, further comprising a combining modules that combines at least one of the first criteria selection and the second criteria selection with the third criteria selection.

33. (Currently amended) The method of claim ~~40~~ 30, further comprising a display that presents the color choices and the criteria choices.

34. (Currently amended) The method of claim ~~40~~ 30, wherein the criteria includes at least one of a substrate, financial cost, availability and pigment selection.

35. (Currently amended) The method of claim ~~40~~ 30, wherein the criteria includes the ability for a color to resist at least one of sunlight, water, solvent, acid, alkali, temperature, humidity, abrasion, cracking, bending, light and ultraviolet radiation.

36. (Currently amended) The method of claim ~~40~~ 30, further comprising a communication network.

37. (Currently amended) The method of claim ~~46~~ 36, wherein the communication network is the Internet.

38. (Currently amended) The method of claim ~~40~~ 30, wherein the optimizing modules modifies the color represented by the color choice.

39. (Currently amended) The method of claim ~~40~~ 30, further comprising an electronic library wherein the color choices and the criteria choices are stored.

40. (Currently amended) The method of claim ~~49~~ 39, further comprising a user interface that provides means to add, update and delete information stored in the electronic library.